WHAT IS CLAIMED IS:

1. An output power controlling apparatus for an internal combustion engine for controlling operation of an output power adjustment member based on a target torque correlation value, comprising:

a vibration component prediction section for predicting a vibration component to be generated on a vehicle from the target torque correlation value using a predetermined prediction model; and

a feedback correction section for feedback correcting the target torque correlation value based on the vibration component predicted by said vibration component prediction section so as to suppress the vibration.

2. The output power controlling apparatus for an internal combustion engine as claimed in claim 1, wherein the predetermined prediction model is set based on a transfer function of a second-order lag system.

3. The output power controlling apparatus for an internal combustion engine as claimed in claim 1, wherein said feedback correction section includes a control gain variation section for setting a control gain to a higher value in response to an increase of the vibration component predicted by said vibration component prediction section.

4. The output power controlling apparatus for an internal combustion engine as claimed in claim 1, wherein the target torque correlation value is calculated based on an accelerator opening, and said output power adjustment member is controlled based on the target torque correlation value after corrected.

5. The output power controlling apparatus for an internal combustion engine as claimed in claim 2, wherein, where a target vehicle attenuation coefficient is represented by ζ', an actual vehicle attenuation coefficient by ζ, a natural frequency set in accordance with a transmission gear ratio by ω_n, and a Laplace operator by s, the transmission function is calculated in accordance with

$$1/(s^2 + 2\zeta\omega_n s + \omega_n^2)$$

and a control gain K set by said feedback correction section is calculated in accordance with

$$K = (\zeta' - \zeta)\cdot 2\omega_n$$

6. An output power controlling method for an internal combustion engine for controlling operation of an output power adjustment member based on a target toque correlation value, comprising:

a vibration component prediction step of predicting a vibration component to be generated on a vehicle from the target torque correlation value using a predetermined

prediction model; and

a feedback correction step of feedback correcting the target torque correlation value based on the vibration component predicted by the vibration component prediction step so as to suppress the vibrations.

7. The output power controlling method for an internal combustion engine as claimed in claim 6, wherein the predetermined prediction model is set based on a transfer function of a second-order lag system.

8. The output power controlling method for an internal combustion engine as claimed in claim 6, wherein the feedback correction step includes a control gain variation step of setting a control gain to a higher value in response to an increase of the vibration component predicted by the vibration component prediction step.

9. The output power controlling method for an internal combustion engine as claimed in claim 6, wherein the target torque correlation value is calculated based on an accelerator opening, and said output power adjustment member is controlled based on the target torque correlation value after corrected.

10. The output power controlling method for an internal combustion engine as claimed in claim 7, wherein, where

a target vehicle attenuation coefficient is represented by ζ', an actual vehicle attenuation coefficient by ζ, a natural frequency set in accordance with a transmission gear ratio by ω_n, and a Laplace operator by s, the transmission function is calculated in accordance with

$$1/(s^2 + 2\zeta\omega_n s + \omega_n^2)$$

and a control gain K set by said feedback correction step is calculated in accordance with

$$K = (\zeta' - \zeta) \cdot 2\omega_n$$